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XXXIX. *Observations of the Sun's Eclipse, 16th of August, 1765, taken at Caën in Normandy. By Nathanael Pigott, Esquire, of Whitton, in Middlesex. Communicated by J. Bevis, M. D. F. R. S.*

Read July 9, 1767.

Tr. Time.

h ' "				' " "		
At 3	57	28	the seg. of the sun's illum. diam. meas.	29	38	14
4	8	52	the distance of the horns ditto	14	47	37
4	18	39	the seg. of the illuminated diam. ditto	27	4	35
4	24	28	the distance of the horns ditto	16	20	24
4	35	47	the seg. of the illuminated diam. ditto	27	14	14
4	43	4	the distance of the horns ditto	14	26	6
4	52	38	the seg. of the illuminated diam. ditto	29	52	1
4	56	54	the distance of the horns ditto	7	46	4

		h	'	''	'	''	'''		
Sun's incl. diam. meas.	at	3	19	38	31	45	11	} the mean ' '' '''	
—— Ditto ——	at	3	22	10	31	42	58		
Sun's horiz. diam. aft.	}	at	5	31	33	31	41	29	} 31 43 20 of the Sun's diam. meas.
the Eclipse									
Sun's inclined diam.	}	at	3	53	37	31	43	42	
meas. August 15 th									

Eclipse

	h	'	"		h	'	"
Eclipse beg. tr. time at	3	48	16	} hence the mid. was at and greatest phase obs. at whence the ecl. incr. for	4	24	36
— end.	5	0	56½		4	18	39
— mid.	4	24	36				
— dur.	1	12	40½				
time, in which the Sun's diam. illum. decreased 36'' 14''; there-							
fore from the Sun's diam. illuminated at							
take the decrease in							
the diam. of the Sun at the middle							

which taken from the mean diam. meas. }
 31' 43'' 20''' gives 5 14 59
 the quantity of the eclipse, or segment of the diameter eclipsed,
 which is 1 digit and 59', 15 of a digit, or $1 \frac{59}{60} = 2$ digits
 nearly. This eclipse was observed with an achromatic refractor
 of 6 feet, and a micrometer made by Dollond. The weather
 very fine.

The times, as computed from the Tables at the end of
 M. De la Lande's Astronomy.

	h	'	"		h	'	"	difference.
Beginning at	3	48	24,6	observ. at	3	48	16	0 8,6
Middle	4	25	11,0	—	4	24	36	0 35,0
End	5	1	57,2	—	5	0	56,5	1 0,7
Duration	1	13	32,6	—	1	12	40,5	0 52,1

Also the latitude of the Moon was, by observation, 16'' greater
 than the tables gave it.